

REMARKS

Claims 1 and 3-6 are pending. Claims 2 and 7-24 are cancelled without prejudice to their later prosecution in this or another application. Applicant has amended claims 1 and 3-6.

New claims 25-28 have been added. Since new claims 25-28 are reasonably conveyed by the specification and original claims, there is no issue of new matter.

Upon entry of this amendment, Claims 1, 3-6 and 25-28 are pending.

Specification

The Office requests that Applicant correct the specification to comply with C.F.R. 1.821 through 1.825, particularly 1.821(d). Applicant submits herewith a substitute specification which complies with the requirements of 37 C.F.R. 1.821 through 1.825 by making proper reference sequences set forth in the "Sequence Listing" where applicable. Applicant also submits a marked-up copy of the substitute specification which shows the corrections made throughout. The substitute specification contains no new matter over that contained in the above-identified application originally filed. Further, the changes made are the same as indicated in the interlineated substitute specification also accompanying this statement. It is submitted, therefore, that the substitute specification should be accepted by the Examiner and entered into the file.

Additionally the Office noted the use of trademarks in the application. Applicant has capitalized the trademarks used and added generic terminology where applicable.

Finally, Applicant has included a claim to priority pursuant to 37 C.F.R. 1.78(a)(5)(i). While the reference is not submitted within the time specified in 37 C.F.R. 1.78(a)(5)(ii), Applicant notes that the claim was included in the Declaration and Power of Attorney filed and recognized by the Office on January 28, 2005. As such, a petition and surcharge under 37 C.F.R. 1.17(t) is not required. (See MPEP 201.11, ¶ 2.15).

Drawings

The Office requests corrected drawings in compliance with 37 C.F.R. 1.121(d) as Figure 2 allegedly does not show the diffraction pattern as indicated by the description to Figure 2. Applicant submits herewith a replacement Figure 2, which more clearly shows the diffraction pattern found in original Figure 2. Additionally, Applicant voluntarily submits herewith replacement Figure 1, which shows a photomicrograph of a crystal of a dipeptidyl peptidase IV indicated in the Figure description of Figure 1 and replacement Figure 3, which shows a photograph showing a three-dimensional structure of a crystal of a dipeptidyl peptidase IV indicated in the Figure description of Figure 3. Replacement Figures 1, 2, and 3 are submitted solely for the purpose of clarity and add no new matter.

Objections under 37 C.F.R. § 1.75(c)

Claims 4-6 are objected to under 37 C.F.R. § 1.75(c) as being in improper multiple dependent claim form. Claims 4-6 have been amended to correct certain multiple dependencies. Applicant requests that the objection be withdrawn.

Rejections under 35 U.S.C. §112, First Paragraph

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. The Office alleges that claims 1-3 are directed to all possible crystals of dipeptidyl peptidase IV (DPPIV) from any biological source, a fragment thereof, or any fusion protein thereof, wherein the crystal is capable of diffracting X-ray. Accordingly, the Office alleges the Applicant has not described a sufficient number of species to show the Applicant is in possession of the claimed genus. As such, the Office alleges the claimed invention is not adequately described.

Claims 1-3 are also rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the enablement requirement. The Office alleges that the claims contain subject matter which was not described in the specification in such a way as to

enable one skilled in the art to make and/or use the invention without undue experimentation. The Office further maintains that the claims are broader than the enablement provided, the claims being drawn to all-possible crystals comprising any DPPIV having any amino acid sequence, fragments and mutants thereof as well as any fusion protein thereof. Applicant respectfully traverses these rejections.

Claim 1 recites a crystal comprising a polypeptide having the amino acid sequence of residues 29-766 of SEQ ID NO: 2 wherein the crystal diffracts x-rays for the determination of the atomic coordinates of the polypeptide at a resolution of 3 Å or less. Additionally, Claim 3 recites a crystal comprising a polypeptide having the amino acid sequence of residues 33-766 of SEQ ID NO: 2 wherein the crystal diffracts x-rays for the determination of the atomic coordinates of the polypeptide at a resolution of 3 Å or less.

Applicant's specification discloses the amino acid sequence of a soluble polypeptide of dipeptidyl peptidase IV SEQ ID NO: 2 where the amino acid residues sequence is chosen from residues 29-766 and where the amino acid residues sequence is chosen from residues 33-766. See paragraph [0056]. Furthermore, the specification provides crystallization conditions that produce a crystal suitable for structural determination by X-ray crystallography with a resolution of 3Å or less. See paragraph [0091] and Example 2.

Accordingly, the specification provides adequate descriptive support indicating to the skilled artisan that the Applicant was in possession of the subject matter of the claimed invention as well as guidance enabling that skilled artisan to make a crystal of a soluble polypeptide of dipeptidyl peptidase IV of SEQ ID NO: 2 without undue experimentation. Applicant requests the rejections to claims 1 and 3 under 35 U.S.C. §112, first paragraph, be withdrawn.

Rejections under 35 U.S.C. §112, Second Paragraph

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctively claim the subject matter which the applicant regards as the invention.

The phrase "having characteristics sufficient to ensure a resolution capable of analyzing its three-dimensional structure up to . . ." allegedly renders original claim 1 indefinite. Applicants have amended claim 1 solely to expedite prosecution. Currently amended claim 1 is supported by, for example, paragraphs [0055]-[0056] of the specification. Applicant respectfully requests the rejection be withdrawn.

Claim 2 is rejected as being indefinite based on the lack of a sequence identification number and the phrase "a region located at extramembrane in a full." Claim 2 has been cancelled, as such this rejection is moot.

Claim 3 is rejected as being indefinite based on the phrase "transmembrane region" in claim 3. As this language is not present in currently pending claim 3, this rejection is moot. Applicant respectfully requests the rejection be withdrawn.

The use of the phrase "tag peptide" has also been rejected as being indefinite as allegedly failing to set forth the patent protection desired. As this language is not present in the currently pending claims, this rejection is moot. Applicant respectfully requests the rejection be withdrawn.

CONCLUSION

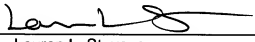
In view of the foregoing amendments and remarks, Applicants respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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